REMARKS

Claims 1 through 21 are currently pending in the application.

Claims 1 through 15 are withdrawn from consideration as being directed to a non-elected invention.

Claims 16 through 21 are rejected.

This amendment is in response to the Office Action of October 22, 2003.

35 U.S.C. § 102(e) Anticipation Rejections

Anticipation Rejection Based on Ackmann (U.S. Patent 6,271,602)

Claims 16 through 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by Ackmann (U.S. Patent 6,271,602).

Applicants submit that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants respectfully submit that Ackmann does not describe, either expressly of inherently, each and every element of Applicants' claimed inventions as presently amended. In particular, Ackmann fails to describe, either expressly or inherently, the element of Applicants' presently claimed invention calling for "depositing a second layer of material having an upper surface thereof substantially over a portion of the upper surface of the substrate allowing the operation of a registration tool regarding the series of raised lines of the overlay target and not substantially conforming to a topography of the overlay target, said upper surface being substantially free, as deposited, of depressions in the portion thereof covering said overlay target in the substrate."

Applicants' claims are generally directed toward a method of preventing the formation of surface irregularities in the upper layers of semiconductor devices due to underlying depressions or trench features in the surface contours of lower layers. Specification, page 6, lines 12-21. Specifically, Applicants' process involves the etching, through a patterned resist, of closely

spaced grooves, in a material layer of a semiconductor, See Figures 6, 8, 10 and 11; pg. 6, lines 25-28; pg 8, lines 4-14. The depression in the lower layer is not reproduced in the newly deposited upper layer.

In contrast, portions of Ackmann are cited as anticipatory disclose the formation and subsequent removal of irregularities of the type which are avoided altogether by Applicants' process, specifically, in Figures 4 through 7 of Ackmann as disclosing the final element of claim 16, which calls for the deposition of a depression-free surface over the etched region. However, FIGS. 4 through7 of Ackmann clearly show the formation of a layer 210 which is deposited over a layer 208 having a surface which bears a depression feature. Layer 210 is clearly a masking layer of resist which is incapable of allowing the operation of a registration tool regarding the series of raised lines of the overlay target. Thus, Ackmann does not describe, either expressly or inherently, the element of the Applicants presently claimed invention calling for "depositing a second layer of material having an upper surface thereof substantially over a portion of the upper surface of the substrate allowing the operation of a registration tool regarding the series of raised lines of the overlay target and not substantially conforming to a topography of the overlay target, said upper surface being substantially free, as deposited, of depressions in the portion thereof covering said overlay target in the substrate" to anticipate the presently claimed invention under 35 U.S.C. § 102.

The final step of Applicants' process is intended by Applicants to be interpreted to mean that the "second layer of material" is "not substantially conforming to a topography of the overlay target " and "substantially free of depressions," *as deposited*, "in the portion thereof covering said overlay target in said substrate," without additional processing steps such as, for example, planarization or polishing. Claim 16 has thus been amended to more clearly reflect Applicants' claimed invention. The words "as deposited" have been added to the final element of the presently claimed invention, along with other language directed to such claimed element of the invention. Ample support for the amendment is found in the specification at page 6, lines 12-21 and page 8, lines 4-16.

Claims 17 through 21 are respectfully deemed allowable as depending, directly or indirectly, from claim 16.

35 U.S.C. § 103(a) Rejections

Obviousness Rejection Based on Ackmann (U.S. Patent 6,271,602) in view of Chiou (U.S. Patent 5,883,012)

Claims 19 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ackmann (U.S. Patent 6,271,602) in view of Chiou (U.S. Patent 5,883,012). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants further submit that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure.

Applicants assert that any combination of Ackmann and Chiou fails to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the presently claimed invention because there is no suggestion whatsoever to suggest any combination thereof, there has been no showing of success for any combination of the cited prior art, any combination of the cited prior art does not teach or suggest all the claim limitations of the presently claimed invention, and any combination of the cited prior art is solely suggested by Applicants' disclosure, not the teachings of the cited prior art. For instance only referring to one of the elements required to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the presently claimed invention based on any combination of the cited prior, Applicants assert that regarding currently amended independent claim 16 neither Ackmann, nor Chiou, nor any combination of Ackmann and Chiou teaches or suggests the claim limitation calling for "depositing a second layer of material having an upper surface thereof substantially over a portion of the upper surface of the substrate allowing the operation of a registration tool regarding the series of raised lines of the overlay

target and not substantially conforming to a topography of the overlay target, said upper surface being substantially free, as deposited, of depressions in the portion thereof covering said overlay target in the substrate" to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the presently claimed invention of presently amended independent claim 16. Accordingly, presently amended independent claim 16 is allowable as well as dependent claims 17 through 21 therefrom.

Obviousness Rejection Based on Ackmann (U.S. Patent 6,271,602) in view of Ghandhi

Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ackmann (U.S. Patent 6,271,602) in view of Ghandhi.

Applicants further submit that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure.

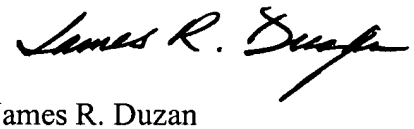
Again, Applicants assert that any combination of Ackmann and Ghandhi fails to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the presently claimed invention because there is no suggestion whatsoever to suggest any combination thereof, there has been no showing of success for any combination of the cited prior art, any combination of the cited prior art does not teach or suggest all the claim limitations of the presently claimed invention, and any combination of the cited prior art is solely suggested by Applicants' disclosure, not the teachings of the cited prior art. For instance only referring to one of the elements required to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the presently claimed invention based on any combination of the cited prior, Applicants assert that regarding currently amended independent claim 16 neither Ackmann, nor Ghandhi, nor any combination of Ackmann and Ghandhi teaches or suggests the claim limitation

calling for "depositing a second layer of material having an upper surface thereof substantially over a portion of the upper surface of the substrate allowing the operation of a registration tool regarding the series of raised lines of the overlay target and not substantially conforming to a topography of the overlay target, said upper surface being substantially free, as deposited, of depressions in the portion thereof covering said overlay target in the substrate" to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the presently claimed invention of presently amended independent claim 16. Accordingly, presently amended independent claim 16 is allowable as well as dependent claims 17 through 21 therefrom.

In summary, Applicants submit that claims 16 through 21 are clearly allowable over the cited prior art.

Applicants request the allowance of claims 16 through 21 and the case passed for issue.

Respectfully submitted,



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Date: January 15, 2004
JRD/sls:djp
Document in ProLaw